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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,514	02/22/2006	Peter Nayler	852663.439USPC	6234
38106 7590 07/19/2007 SEED INTELLECTUAL PROPERTY LAW GROUP PLLC 701 FIFTH AVENUE, SUITE 5400 SEATTLE, WA 98104-7092			EXAMINER GANNON, LEVI	
			ART UNIT 2817	PAPER NUMBER
			MAIL DATE 07/19/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/531,514	<b>Applicant(s)</b> NAYLER, PETER	
	<b>Examiner</b> Levi Gannon	<b>Art Unit</b> 2817	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22 is/are allowed.
- 6) ☒ Claim(s) 23,25,28,29 and 40 is/are rejected.
- 7) ☒ Claim(s) 24,26,27,30-39 and 41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/22/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

Figures 1-7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 28 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 28 recites the limitation "the modulation circuit" in line three of the claim. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Stribling et al (hereinafter Stribling) (US Patent 5,144,260).

Regarding claim 23, Stribling discloses a method (with the use of figure 4) for stabilizing the operation of a voltage controlled oscillator (50) that sends an RF signal (output of 50) and is driven by a phase locked loop (seen in figure 4) comprising: receiving through at least one spurious path a harmonic component of a frequency equal or proximate to that of the RF signal sent (feedback from antenna, note column 1, line 66 to column 2, line 3), capable of disturbing the operation of the voltage controlled oscillator by injection pulling (note column 2, lines 2-3); injecting into the voltage controlled oscillator an injection pulling compensation signal (through summer 65), the phase and the amplitude of which are adjusted so as to neutralize the disturbing effects of the harmonic component (note column 5, lines 10-25).

As for claim 25, Stribling teaches the single ended injection (through 65), at one point (control input) of the voltage controlled oscillator (50), of a compensation signal having a unique component (unique to particular perturbing signal from antenna).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stribling in view of Cruz et al (hereinafter Cruz) (US Patent 6,016,082).

In terms of claim 40, Stribling teaches the method according to claim 23, as stated above, but fails to expressly teach the compensation signal being injected onto one terminal of a passive component of the voltage controlled oscillator.

However, it is well known to those of ordinary skill in the art to apply a control voltage to capacitors (passive components) of a voltage controlled oscillator in a phase locked loop. Cruz teaches a well known example of applying a control voltage ( $V_c$ ) to capacitors (223, 224) of a voltage controlled oscillator (103 in figure 1; detailed in figure 2) of a phase locked loop (figure 1).

Accordingly, it would have been obvious to apply the compensation signal of Stribling to passive components (capacitors) in the voltage controlled oscillator of Stribling because such a modification would have been making use of a well known practice in the art.

***Allowable Subject Matter***

Claims 1-22 are allowed.

Claims 24, 26, 27, 30-39, 41 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The best art of record, Stribling, taken alone or in combination of other references fails to teach or fairly suggest a modulation circuit, as set forth in claim 1, the compensation signal having an amplitude substantially equal and phase opposite the spurious signal, as set forth in claim 24, the injection signal having two components, as set forth in claims 26 and 27, a harmonic generating circuit, as set forth in claim 30, a phase shift circuit as set forth in claim 31, two attenuator, as set forth in claim 33, the compensation signal being injected onto an active component of the voltage controlled oscillator, as set forth in claim 39, or the compensation signal being injected by inductive coupling, as set forth in claim 41.

***Conclusion***

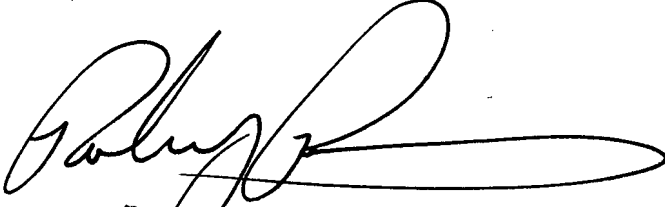
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Levi Gannon whose telephone number is (571) 272-7971. The examiner can normally be reached on Monday-Friday 9:30AM-6:00 PM.

Art Unit: 2817

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LG



Robert Pascal  
Supervisory Patent Examiner  
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